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ABSTRACT

This report presents the findings and recommendations of the Learning Laboratory project, an exploratory study of an alternative education model designed to help drug-abusing adolescents. The materials address: (1) the facility, materials, staff, and activities of the program: (2) the curriculum, basic skills workshops, language classes, field trips, and counseling sessions: (3) the six modes of client evaluation: (4) client characteristics: (5) program effectiveness reflected by client educational progress, involvement, and drug use change: and (6) criteria used to predict success and failure of the participants. Recommendations, areas of continued problems, a bibliography, and statistical appendices are alsc provided. (HLM)

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The Learning Laboratory

The Door—A Center of Alternatives

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Preface

This report presents the findings and recommendations of the Learning Laboratory project, an exploratory study of an alternative education model designed to help treat drug-abusing adolescents. The Learning Laboratory demonstration project was operated by The Door--A Center of Alternatives, a multiservice center for youths in New York City. (Within These Doors--A Report on The Door--A Center of Alternatives, a publication which describes various programs operated by The Door, will be available shortly from the National Clearinghouse for Drug Abuse Information.) Both The Door and the Learning Laboratory are projects of the International Center for Integrative Studies. The initial ideas for the establishment of the project developed from 3 years of experience of the Education Counseling Services of The Door in aiding drug-abusing youths. Many of these youths did not seek help from traditional drug treatment programs. They did, however, see a poor education and lack of basic skills as major obstacles in obtaining satisfying jobs, vocational training, or higher education.

The Learning Laboratory was designed to offer these youths an environment in which to address and resolve adjustment problems through participation in a practical learning process. It was also designed to serve as a model program which could be replicated within the public school system, other drug treatment programs, or relevant human services agencies.

This description of the Learning Laboratory program and its impact will have significance for persons engaged in the provision of both treatment and prevention services. The Learning Laboratory is not only an important treatment experience, but also holds promise as a major program of early intervention. As will be discussed in the report, the youths (ages 12-21) seen in the Learning Laboratory are usually school dropouts (76 percent), unemployed (75 percent), and are using opiate or--more commonly--nonopiate drugs with some frequency. While most of the Learning Laboratory youths report an arrest history, comparatively few have been convicted and/or imprisoned. The Learning Laboratory then provided these youngsters with an alternative to the antisocial drug-related careers on which they had embarked. Youngsters who had reason to see themselves as failures in school and failures in life were provided unique opportunities to build self-esteem and competence in areas crucial to their later functioning. The Learning Laboratory sought to build core life skills as well as core academic and vocational skills. What follows is a description of that program and an analysis of its impact on the youngsters referred to it.

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Introduction and Summary

The Learning Laboratory, a 3-year research and demonstration project funded by the National Institute on Drug Abuse, was developed in 1974 by the International Center for Integrative Studies as a model to demonstrate and evaluate the drug treatment and rehabilitative effects of an experimental education program. The project was specifically designed to serve inner-city youths who were involved in drug abuse, who had learning problems, and who had become disinterested in and alienated from their schools. Learning Laboratory clients were youths who had failed repeatedly or been "pushed on" in school, who struggled with learning problems due to emotional, social, or physical difficulties or cultural differences, who lacked sufficient skills to apply for high school equivalency preparation or vocational training programs, and who lacked self-confidence and realistic life goals. The Learning Laboratory was established to offer these youthful drug abusers an individualized structured education and treatment program. It was structured to help youngsters come to a greater understanding of and develop the ability to deal with the factors underlying their drug use and educational problems, while preparing themselves through the acquisition of needed skills to establish an independent, constructive, and drug-free life.

In January 1975, the Learning Laboratory began admitting youthful drug abusers between the ages of 12 and 21. During the next 3 years, 160 young people participated in the program. Seventy-three percent (117) of this group remained in the Learning Laboratory for 3 months or more and actively participated for an average of 6.5 months. Of this group, which comprised the study sample, 76 percent were school dropouts, 75 percent were unemployed, and 95 percent were regular (daily to once-per-week) drug users. Follow-up data were collected on 54 participants during the final months of the program.

As reflected in the drug abuse and dropout literature, youths who came to the program were experiencing numerous difficulties in the interpersonal, familial, and socioeconomic dimensions of their lives. Thirty-six percent of the participants came to the program by word of mouth, having heard of the Learning Laboratory from friends or relatives, while others were referred by agencies and institutions including the public schools, the courts, and adolescent residences. Ongoing contact was maintained with several of these agencies, and mutual systems of support, referral, and information exchange were established.

The Learning Laboratory treatment components addressed a variety of topics on remedial to advanced levels and used a range of formats for learning in order to meet appropriately the diversity of problems and interests of clients. In addition to improving academic and prevocational skills, the workshops, special projects, and other components were oriented toward increasing clients' knowledge about personal, social, vocational, and environmental issues, problems with which inner-city adolescents commonly struggle and which are frequently associated with youthful drug abuse. Program components were organized into the following areas: individualized basic skills workshops, English as a second language and Spanish language workshops, theme-centered workshops, special projects and field trips, community meetings, and individual counseling.

Learning Laboratory clients participated in regularly scheduled evaluations of their progress. These included monthly mid-cycle, end-of-cycle, and quarterly evaluations, and covered changes in participants' learning skills, attitudes, and behavior. Each young person also kept a journal of daily activities.

The effectiveness of the program was statistically evaluated by measuring pretest and posttest changes in three dimensions of the participants' lives: educational progress, drug use patterns, and involvement in purposeful activities (employment, training, and/or education). The participants were found to have significantly improved in all three areas, and the results indicate that the program was therapeutically effective. In addition, the results contrast favorably with

normative trends and with other types of programmatic interventions.

Analyses of which clients were most and least successful in the program indicated that those who were least successful generally had significantly poorer initial reading levels and showed greater instability in their living situations. Five of the 10 specially developed education indices significantly discriminated the successful from the unsuccessful participants. An analysis of the reasons why participants left the program revealed that more than half left as a consequence of personal or emotional problems, and nearly half left due to financial pressures. Professional psychological assessment and counseling, stipends, and vocational skills training were recommended as supplementary services that could help to address these problems more fully in future programs of this kind. An analysis of the clients' needs at followup indicated a continued pattern of financial hardship and a need for vocational skills training, as well as a continued interest in furthering their education.

1. Background

The extent of school failure among youths is clearly, though not exclusively, demonstrated by the high rate of dropping out among high school students. Three general questions regarding the nature of the dropout problem have been asked: (1) Why do youths drop out of school? (2) Are there any characteristics distinguishing those who drop out of school? (3) What are the consequences of dropping out in terms of the psychological needs of adolescents? These questions, of course, can only be addressed very briefly here. Very little empirical work has explored the problem of why adolescents drop out of school. The Community Council of Greater New York conducted a survey of research addressing this question and found a wide range of reasons why young people drop out (1976). Most research has focused on the characteristics of youths who do drop out and has found that they are typically alienated from their schools, their families, their dominant peer group, and from the economic mainstream (Mechan and Mink 1970; Cervantes 1965; Schreiber 1970; Elliot and Voss 1974).

In addition, the institutional and interpersonal supports important to normal adolescent growth are much less available to dropouts than to youths in school. That such support resides, in great measure, in the schools is reflected in the finding that the peak age for juvenile delinquency in England shifted dramatically from age 13 to 14 at exactly the same time at which the mandatory school age increased from 13 to 14 (Mays 1971). As Erikson (1963, 1968) and others have stressed, adolescents need gradually and freely to explore their interests, creative outlets, career ideas, interpersonal needs, likes, and dislikes. They need to build a resilient and stable personal and social identity. This process is facilitated by encounters with a variety of positive adult role models. These opportunities for psychological and psychosocial growth are greatly diminished when the adolescent leaves school. For many youths, the final result of dropping out is that they are prematurely forced to make life decisions and choices for which they are not prepared.

Although studies of dropping out and of adolescent drug abuse have generally remained separate, considerable overlap in the characterizations of dropouts and drug abusers can be found. A significantly higher incidence of illicit drug use has been found among dropouts (Johnston 1973). Furthermore, drug abuse has been found to be inversely related to school achievement (Smith and Fogg 1975; Johnston 1973, 1974). Johnston found that "level of education is inversely related to every one of the drugs, legal and illegal, during the school years" (1973, p. 129). That is, youths who use any or all of the illicit drugs tend to perform less adequately than do nonusers. However, Johnston is careful to point out that these reported grade decrements occurred at least as far back as the ninth grade, before most adolescents started using drugs. It is, therefore, impossible to determine the direction of causality. As Johnston suggests, some other underlying factor or set of factors may have stimulated both drug use and dropping out.

As with youth who drop out of high school, adolescent drug users and abusers also tend to be alienated from school, their family, and their peers, and typically have poor self-esteem and lack self-confidence (Block 1975; Carman 1973; Johnston 1973; Adler and Joteca 1973; Kandel 1975; Smith and Fogg 1975; Norem-Hebeisen 1975; Wechsler and Thum 1973; Yankelovich 1975). Drugs are often used by adolescents as a buffer against the stresses and strains of growing into adulthood (Cohen 1971; Dohner 1972), a transition which is typically more traumatic for the high school dropout than for the high school or college student. Instead of learning how to cope realistically and constructively with anxiety, disappointments, depression, and identity confusion, many adolescents turn to drugs, which are often readily available. In many cases these youths feel that society and its institutions are unresponsive to their needs and that there is no meaningful place for them. They need support from their peers and from responsible adults in order to gain strength and confidence to cope with their many life struggles. They also need

encouragement and guidance in becoming actively involved in meaningful activities which facilitate rather than hinder adolescent development. Without such opportunities, many youth become increasingly involved with the subculture of drug abusers and become increasingly fearful of learning to deal with their problems without the aid of drugs. Without viable options many eventually act out their problems and hostilities in socially and psychologically damaging ways (Preble and Casey 1969).

Information derived from documented research studies suggests several general guidelines for education programs serving adolescents. If dropping out and drug abuse are viewed as behavioral manifestations of feeling unrelated to persons and institutions in the environment and as indicative of unresolved conflicts within themselves, then any attempt to resolve these problems must be directed both at alleviating alienation and at creating opportunities to facilitate personal growth and exploration. Despite their failures in school, the vast majority of these young people express a strong desire to learn (Community Council of Greater New York 1976), but they do not wish to return to their previous schools (Lokin 1973). Elliot and Voss (1974) found that dropping out of school, by virtue of removing the youth from an intolerable setting, often reduced the dropout's rate of delinquent behavior.

A number of suggestions drawn from research literature can be set forth which take into consideration the desire to learn among dropouts and drug abusers, as well as their broad-based alienation and their histories of failures and frustrations. First, any educational program for "problem youths" should provide a setting in which the young people receive structured support for their efforts. This could involve individualized attention and availability of teachers or counselors with whom the young person can feel comfortable speaking about academic as well as personal problems. These adolescents need someone to talk with about the difficulties they may be having in relating positively with their peers, parents, and other adults. They need to be able to talk with adults who will listen and respond supportively in a nonjudgmental manner about serious issues such as drug use or boyfriend/girlfriend conflicts. They also need to learn how to apply what they learn in school to their daily lives. The importance of providing for these needs is indicated in several studies, as well as in the Learning Laboratory findings. Repeatedly, participants in the Learning Laboratory indicated that while they were in school they felt there was no one in the school system they could really talk to, that too much emphasis was placed on grades, and that the teachers did not respect them (Thornburg 1971, 1975; Ahlstrom and Havighurst 1971; Community Council of Greater New York 1976; National Education Association of the United States 1965; Wynne 1976).

Second, as many of these studies indicate, these young people felt alienated from the content of what is taught in school and uninvolved in selecting what to study. An education program should provide students an opportunity to learn about and become involved in activities that are meaningful to their lives. These might include workshops and seminars on such topics as developing life skills, psychosocial problems of adolescents, career exploration, vocational skills training, ethnic studies, and physical fitness. The selection of subjects should reflect an attitude that all aspects of the young person's life are important, and that education is an enterprise which deals holistically with people's lives. Whatever learning opportunities are offered, the young people should participate actively to the degree appropriate in their selection.

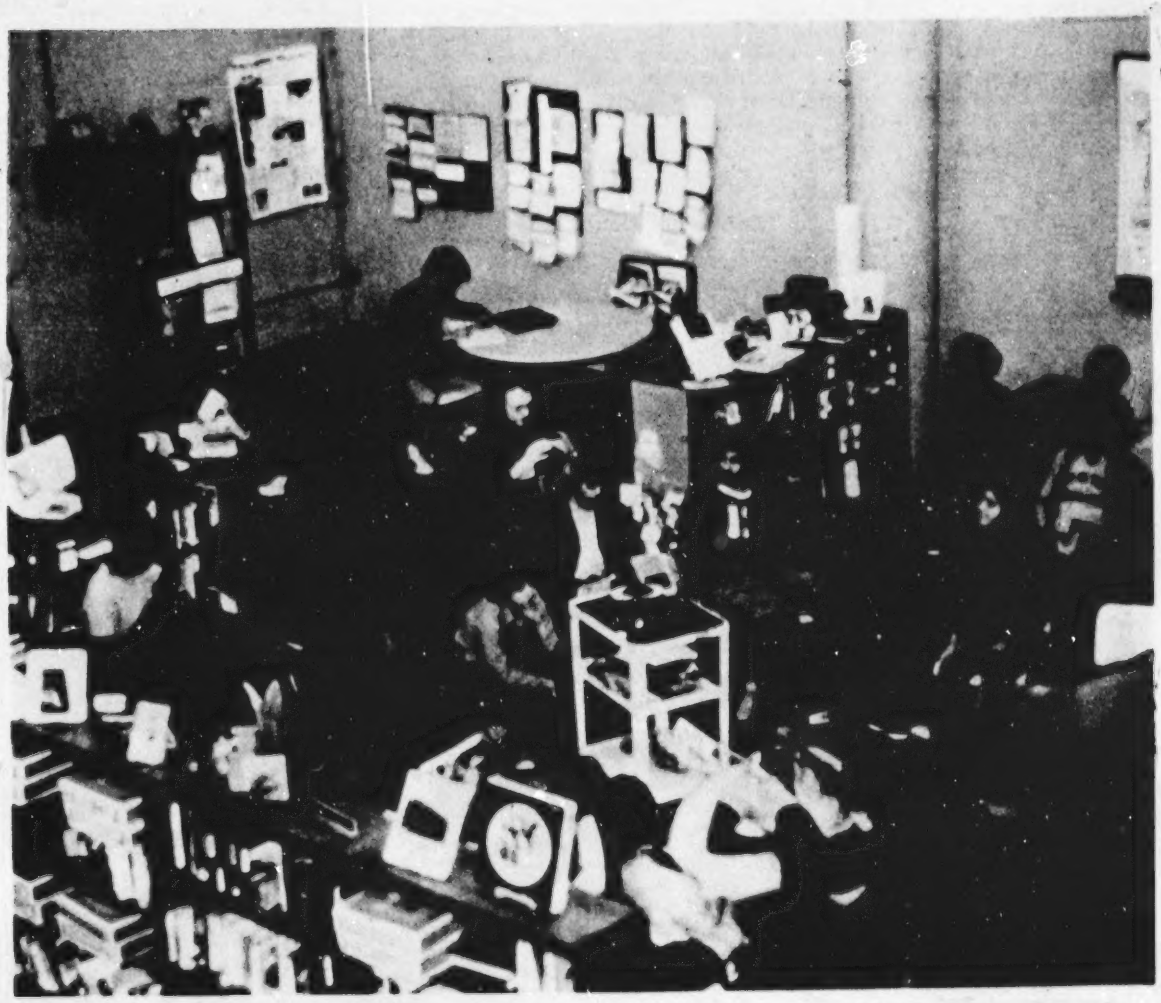
Third, there should be built into the program the means for working cooperatively in groups. Students should be encouraged to work noncompetitively with peers, to reduce their sense of alienation, to develop a more positive self-image, and to increase their ability to work productively with others.

Finally, youths need to participate in establishing realistic short- and long-term goals for themselves, and their teachers need to provide frequent feedback and evaluation of their progress.

2. The Program

FACILITY

The Learning Laboratory was located in the facility housing The Door--A Center of Alternatives, a multiservice center for youths in New York City. It was designed to incorporate many of the features of an open classroom, a multimedia learning center, and a library. Areas for workshops and projects,



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special audiovisual presentations, group meetings, tutoring, and individual study were set up and defined by flexible arrangements of tables, carrels, files, and bookshelves. Minienvironments were created utilizing books, wall maps, posters, and other materials reflecting the activities of each major workshop area. The resource center contained basic reference materials such as encyclopedias, newspapers, magazines, dictionaries, and atlases, as well as a variety of print and nonprint materials of general interest. The resource center was available to any participant during program hours and served to encourage participants to explore their own interests and to improve their academic skills either on their own or with peers, outside the regularly scheduled activities. The physical environment of the Learning Laboratory was intended to diminish the young person's fear of being "trapped" in a traditional school setting and to reduce the tendency to identify a new educational program with previous schools and negative associations.

EDUCATIONAL MATERIALS AND TECHNOLOGY

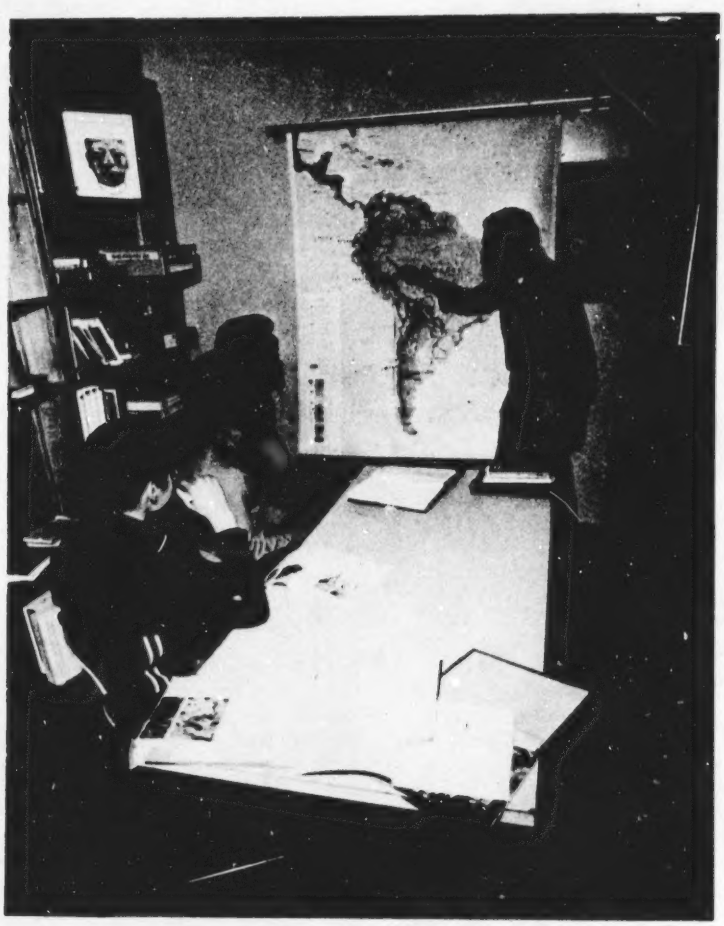
The collection of print and nonprint materials covered a wide variety of areas including remedial reading, mathematics, writing skills, secondary science and social studies, English as a second language, literature, consumer education, life skills, anthropology, religion, career education, ecology, psychology, women's studies, and black, Hispanic, and Third World studies. To the extent possible, materials of varying levels of difficulty and of different formats were collected in each area. Materials from participants' own life situations, such as subway and bus maps, job application forms, recipes, directories, product labels, directions, and want ads were also collected. All materials were organized according to workshops or interest areas and were color coded to make them easier to locate. All participants were entitled to take out books from the library for 2-week periods.

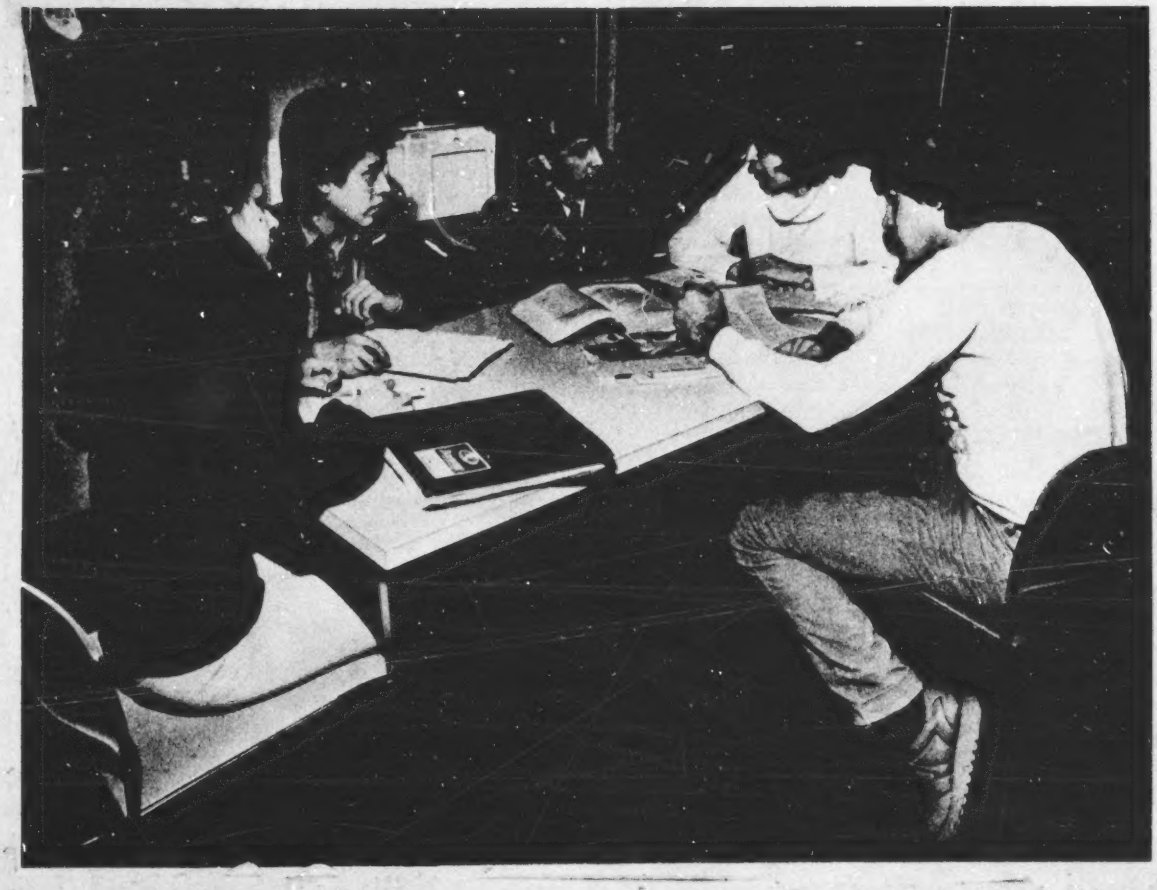
In addition to print materials, many types of educational audiovisual hardware and software were selected. Criteria used in selecting equipment included simplicity and flexibility of use, durability, economy, and variety of materials each machine was able to accommodate. The media library included the following audiovisual equipment: sound filmstrip projectors, silent filmstrip projectors, 8-mm projectors, a 16-mm projector, a slide projector (with accompanying tape recorder for synchronized sound-slide presentations), an overhead projector, tape recorders, reading pacers, calculators, and typewriters. A collection of audiovisual materials specific to each piece of equipment was developed and continued to expand throughout the existence of the Learning Laboratory.

All of the educational materials were evaluated for their appropriateness and relevance to the needs and interests of inner-city, drug-abusing youths and for quality of presentation, level of difficulty, educational approach, durability, and economy. Special attention was given to the selection of high-interest/low-level materials. In areas where there were few good commercially produced materials, teachers developed their own. Informal evaluation of the educational materials was made continually by both the staff and the participants, and suggestions for new materials were frequently elicited.

STAFF AND STAFF TRAINING

The staff consisted of an administrative director, a research associate, a program coordinator (supervising teacher), a counselor, four teachers, a teacher aide, a librarian/media





specialist, and volunteer tutors. In developing an innovative education and drug treatment program for youths who had frequently failed in school and other life endeavors, the selection and training of a capable staff was of major importance. After an initial screening interview, those who seemed most qualified and interested in the project were invited to participate in a supervised practice teaching or counseling session. In addition to professional requirements specific to each position, all staff members were required to have a minimum of 2 years experience working with urban youth, to be flexible in their approach to education and counseling, to be team oriented, and to enjoy working with young people.

All new staff members received approximately 1 month of initial orientation and training. Training in the use of client charts, interviewing techniques, writing of monthly evaluations, and filling out the educational indices was continued throughout the orientation period. During this month, the new staff members also participated in workshops, attended staff meetings, and were trained in the content and use of the educational materials and technology utilized by the project. Also, the new teaching staff were allotted time to develop the curriculum for their assigned workshops.

In addition to this initial orientation and training period, ongoing training was conducted on a regular basis. This training was instituted to supplement the staff's professional education and experience and was designed to help them to respond more effectively to the needs of the inner-city, drug-abusing youths. Outside speakers were invited to conduct training sessions on such

topics as drugs and drug abuse, human relations and communication, counseling and interviewing skills, and the dynamics of adolescent development. In-house training sessions were also conducted in such areas as curriculum development, individualization of materials, recordkeeping, counseling, and organizational skills. Inservice meetings were held twice a week. These meetings served as a forum for new program ideas and procedures, coordination of program components, discussion of strategies for dealing with new problems, and treatment planning sessions for new as well as ongoing clients. Staff meetings and training sessions enabled the staff members to work together as an integrated, mutually supportive, interdisciplinary team.

PROGRAM ORGANIZATION

The Learning Laboratory operated 5 days a week on a year-round basis, in the afternoons and evenings. Program activities and evaluations were scheduled around 8-week cycles. At the end of each cycle, participants met with their primary teacher to review monthly evaluations and client journals, to receive feedback, to review program schedules, and to reassess the need for supportive services. Workshop and tutoring schedules were adjusted where appropriate, and new program activities were introduced at the beginning of a new cycle. Although the program ran on a cyclical schedule, new participants could enter at any point once their orientation process was completed. Each client followed an individually structured program which included educational activities and supportive counseling designed to meet his or her particular needs. The duration of a participant's involvement was determined by individual needs and goals.

INTAKE, ORIENTATION, AND TREATMENT PLANNING

Each young person was initially screened to insure that the drug use, age, and educational requirements of the project were met.

Those who met these criteria were invited to a new people's meeting. These meetings were held once or twice a week as needed and marked the starting point of a 2-week orientation process for newly arriving youths. The meetings provided a forum in which to begin to express needs, desires, and fears regarding their education and drug abuse problems. Besides encouraging the young people to talk about themselves and to begin to establish positive contacts with peers and the staff, new people's meetings also served to inform prospective participants about the activities and objectives of the program. Tours were given accompanied by an explanation of how the various areas were used. In addition to an orientation to the types and location of materials and equipment, clients were given instruction in the use of the educational technology.

During the 2-week orientation period, all prospective clients were required to participate in Learning Laboratory activities at least three times a week for a minimum of 2 hours each day. Attendance in one of the basic skills workshops was mandatory, as was attendance at weekly community meetings. Participants also had appointments with the reading and mathematics teachers for an initial assessment of their skill levels, and during this time a staff member was assigned to complete the intake interviews, which consisted of demographic information, a psychosocial history, and a drug and education history and profile.

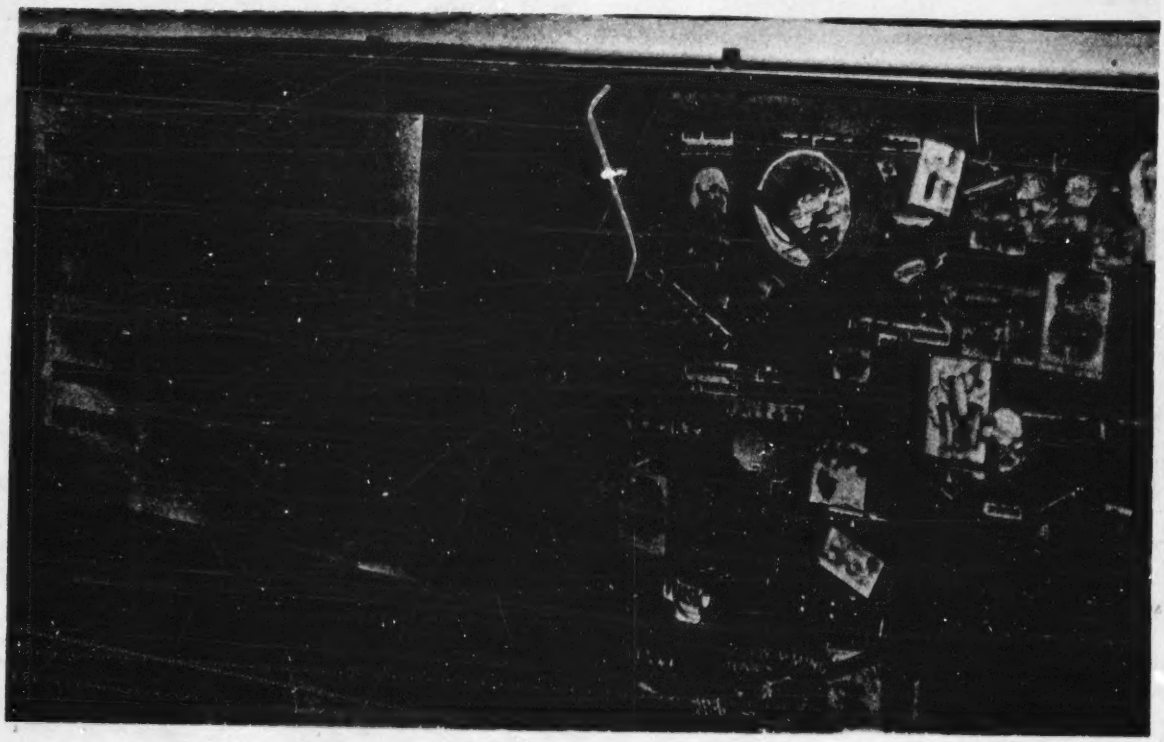
In addition to these required activities, prospective participants were encouraged to explore and utilize the resource area on their own and to drop in on open workshops. The orientation period was conceived as a time when new young people would begin to become familiar and comfortable with the program, staff, and other participants. It was a time, moreover, in which the young people, especially those who had experienced a great deal of alienation in their lives, began to develop a sense of belonging through the establishment of warm and supportive human contacts.

Following each candidate's orientation period, the staff met to discuss what they felt to be the most appropriate treatment plan for the young person. On the basis of information gathered during the initial interviews, skill assessment tests, and an assessment of the candidate's participation during orientation, the individual's strengths and problem areas in his or her life situation and in past or present school situations were identified. The process of defining conditions and attitudes influential in the initiation and continuation of drug abuse was begun, and the nature and extent of commitment the staff felt a young person could realistically make was assessed. Guidelines for the structure and content of a participant's schedule were developed, and learning materials and approaches to be used were recommended. In some cases, when the young person's orientation attendance was sporadic, she or he was required to continue in the orientation phase until all the components outlined above were completed. In cases of an apparently severe perceptual or organically based learning problem or a need for intensive psychological counseling, the young person was referred to an appropriate agency or clinic. Young people who were considered appropriate and ready for the program chose or were assigned to a main teacher. In the initial meeting between a new participant and his or her main teacher, the consent form was explained and signed, realistic short- and long-term goals were developed, a schedule was made for the present cycle, and the client journal was explained and begun. Some young people, because of their fear of failure and difficulty in following through with a commitment, were given limited schedules, especially during the initial cycle. Once they began to feel a sense of accomplishment and were able to make a consistent effort, their schedules were expanded. The teacher also reviewed the special role of the main teacher and the general rules for participation in the program. From the beginning of their participation young people were encouraged to take on as much responsibility and initiative as they were able.

3. Curriculum

A range of formats for learning was utilized in order to meet the diversity of needs and interests of clients appropriately. Topics were offered at remedial to advanced secondary levels and oriented toward increasing knowledge about the personal, social, vocational, and environmental issues which are frequently associated with youthful drug abuse. Gaining knowledge of these different areas meant more than merely absorbing information about them. It also meant that participants were encouraged to incorporate their newly acquired knowledge into their day-to-day behavior.

Program components were organized into the following areas: individualized basic skills workshops, English as a second language and



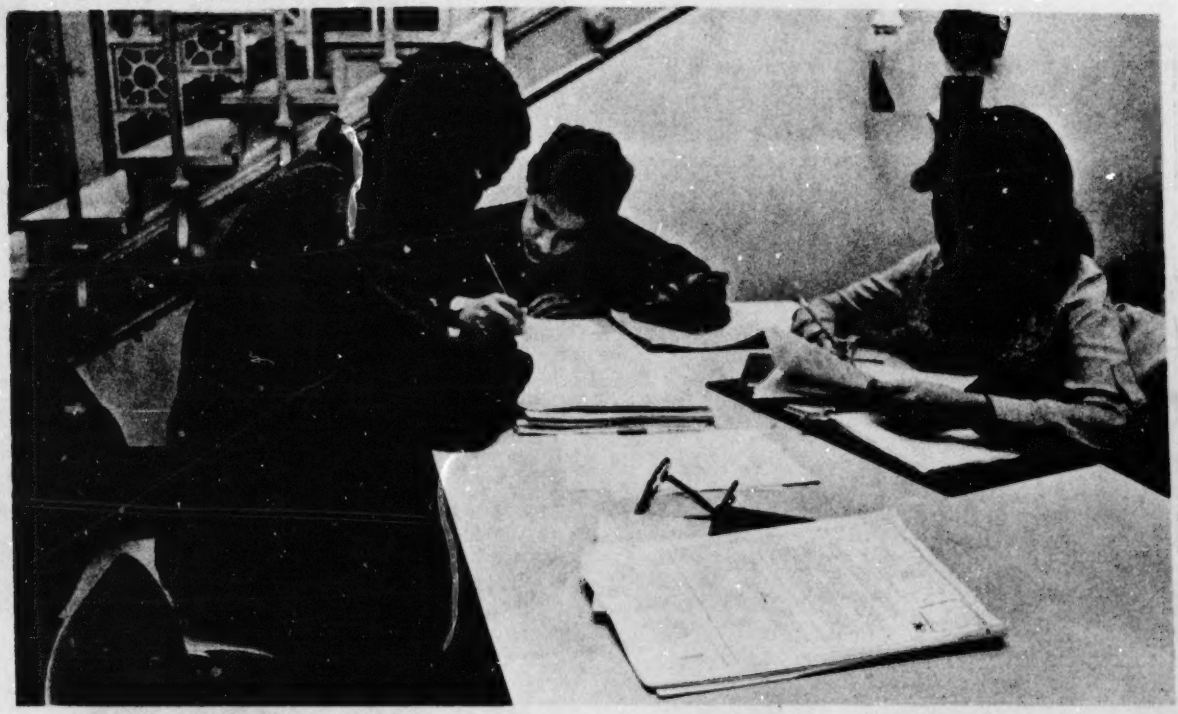
Spanish language workshops, theme-centered workshops, special projects and field trips, community meetings, and individual counseling.

INDIVIDUALIZED BASIC SKILLS WORKSHOPS

Small-group instruction was provided for six to eight participants with similar levels of ability who needed assistance in mathematics, reading, writing, and other language skills. Although basic skills workshops were not identified by level of difficulty, they were usually divided into three groupings: (1) those with clients functioning on or below third grade level, (2) those with clients functioning between fourth and sixth grade levels, and (3) those with clients functioning at or above seventh grade level. Each participant in a basic skills workshop had his or her own specific goals and materials and proceeded at his or her own pace. Educational technology including reading pacers, autotutorettes, and sound filmstrips were used on an individualized or team basis.

Individualization of basic skills workshops not only allowed participants to learn at their own pace and according to their own best learning style, it also allowed teachers the flexibility to build in materials and activities that directly related to clients' life situations. For example, topics such as budgeting, learning to read subway maps and directories, and filling out applications were incorporated into the workshops. In addition, individualizing learning in a group setting prevented the isolation of clients and encouraged the development of a spirit of community among members of a workshop. Informal peer tutoring and teaming up to do exercises was also encouraged and often occurred between participants.

In some cases participants who needed additional help in a basic skill or who were initially too self-conscious of their low skill level to sit at a table with others were assigned a tutor on a one-to-one basis.

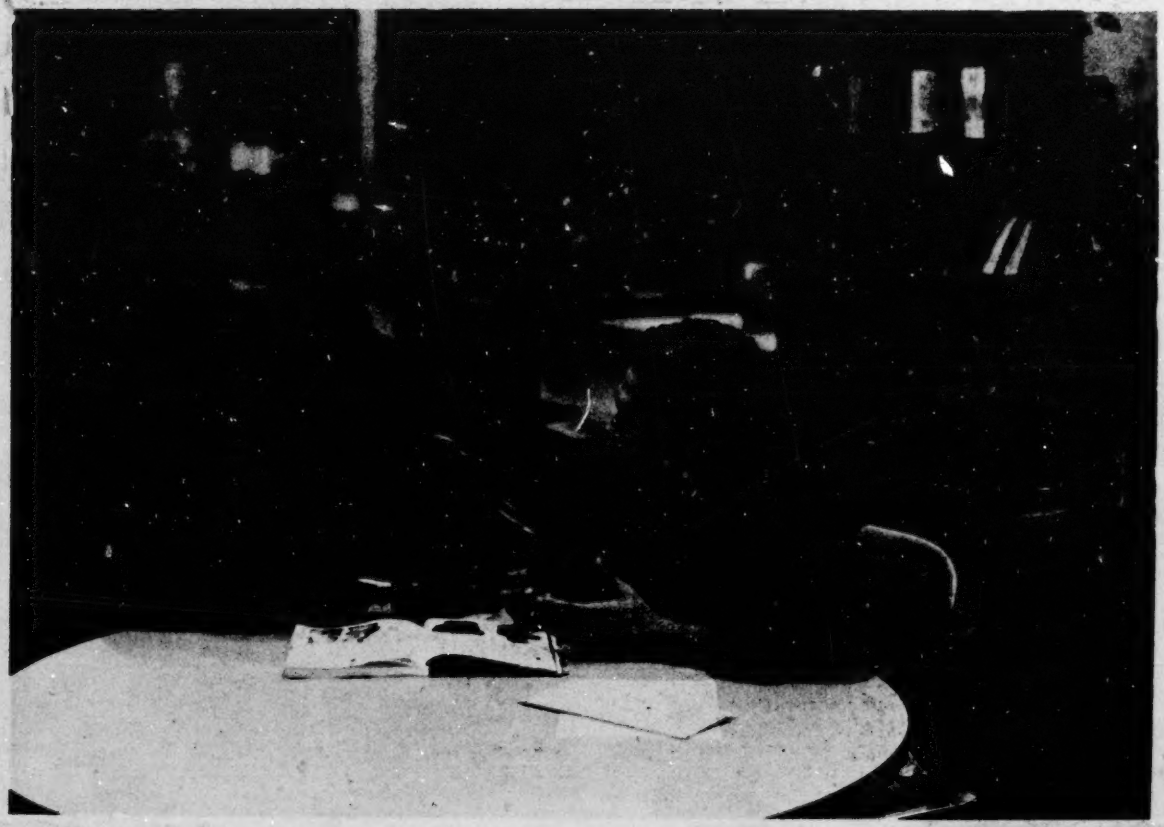


Goals of participants in the basic skills workshops included completing pre-G.E.D. (General Educational Diploma) preparations and preparing for the high school equivalency examination or for vocational training examinations. Participants who were still attending a public school utilized the basic skills workshops as a remedial program which supplemented their regular school classes.

ENGLISH AS A SECOND LANGUAGE AND SPANISH LANGUAGE WORKSHOPS

The English as a second language workshops approached the study of English within a broad cross-cultural context. They were aimed at youthful drugs abusers who had not achieved a functional proficiency in English, were isolated, and had difficulty functioning in a new cultural environment. Studies included the differences and similarities in cultures, such as values and social customs, and how these are expressed through language, as well as exploration of social problems and issues relevant to inner-city youths. English grammar and conversation were studied in the context of life in the United States and were oriented to building a functional vocabulary appropriate to the realities of New York City. Language exercises dealt with practical life situations through readings, dialogues, and skits about typical day-to-day experiences. Materials such as sound filmstrips, slides, and songs were used. The focus of the workshops was on helping young people to attain a basic mastery of the English language, to become familiar with and comfortable in their new cultural environment, and to develop the tools needed to be able to deal more constructively with the kinds of life situations which were influential in their involvement in drug abuse. Youths in need of additional assistance received individual tutoring.

Spanish language workshops were offered to clients of Hispanic background who could not read, speak, or write fluently in Spanish. Becoming grounded in their native language often improved their self-image as learners, and helped them to qualify for bilingual employment opportunities. With six to eight students in each, both the Spanish language and the English as a second language workshops combined individualized and group-centered learning.



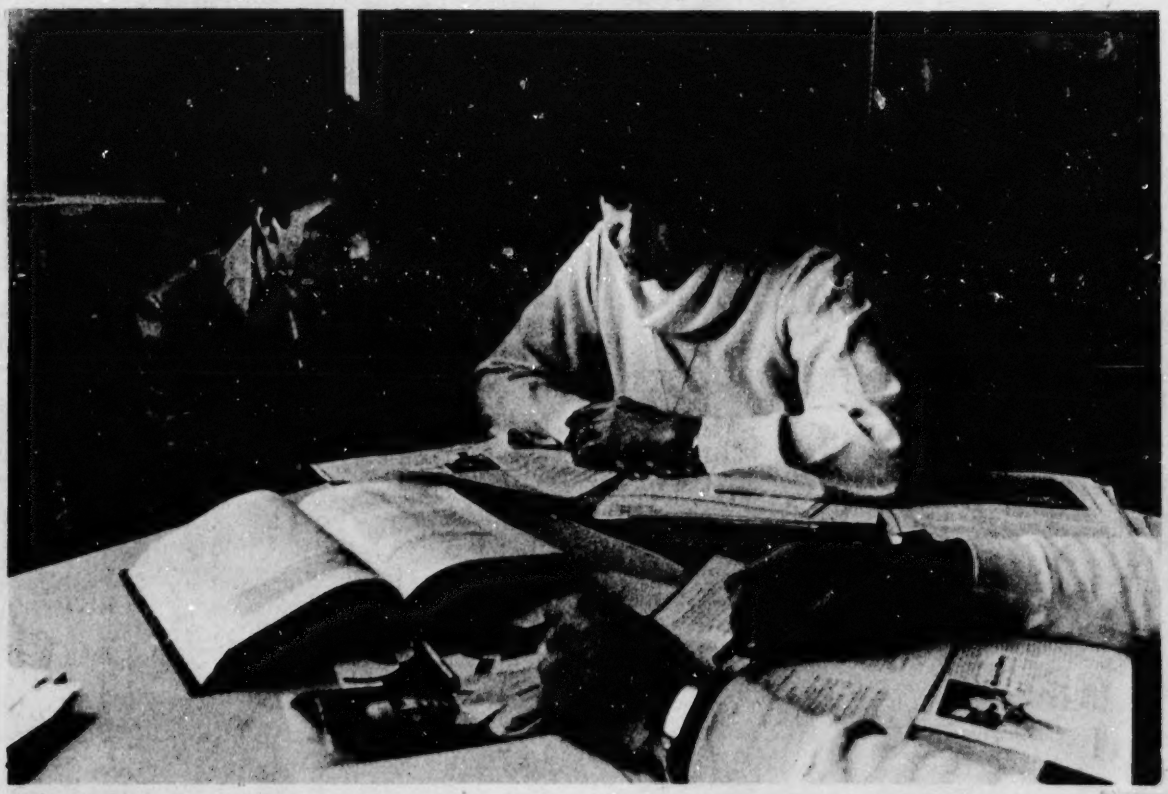
THEME-CENTERED WORKSHOPS

Theme-centered workshops focused on values clarification, problem solving, career education, and cultural studies, and were offered to groups of 8 to 12 participants. These group discussions were facilitated by a staff member or visiting speaker and met once a week for 1 or 2 hours. Films, filmstrips, and other educational materials were utilized. These workshops helped participants learn to communicate more clearly and openly, to explore personal and societal values, and to develop good problem-solving skills. In the area of career education, volunteer representatives from local business and industry, as well as staff of The Door's vocation counseling services, led discussions about a variety of careers and job training.

Other theme-centered workshops focused on cultural studies and included black history, Hispanic studies, and Third World studies. These workshops were aimed at increasing participants' understanding of and appreciation for their own and others' cultural backgrounds.

PREVOCATIONAL SKILLS TRAINING WORKSHOPS

Responding to the concern among participants to prepare for and obtain employment, several workshops were offered that focused upon introductory vocational skills. Generally these workshops were conducted in 8-week cycles and met twice weekly for 2 hours. They included training in basic electricity, introductory electronics, bookkeeping, basic accounting, and photography. All the workshops with the exception of photography were taught on a voluntary basis by teams from two large companies. Participation in a prevocational skills training workshop often motivated clients to apply themselves with greater commitment to their basic skills as they experienced a direct and practical connection between academic skills improvement and career goals.



SPECIAL PROJECTS AND FIELD TRIPS

Special projects were conducted once a week for 2 hours and involved a group of 12 to 20 participants. The projects provided clients with an opportunity to explore issues of particular interest, including sexuality, family planning and the responsibilities of family life, nutrition, physical fitness, and the legal rights of minors. Each project series was conducted by a qualified professional from The Door or other service agency. Participation in special projects often resulted in clients seeking help for problems they were previously unwilling to address.

The field trips enabled participants to gain exposure to new areas of the city and its agencies, institutions, and lifestyles. By visiting local neighborhoods and community centers, participants also had an opportunity to gain a broader perspective of the city and of their own neighborhoods. Some field trips were made in conjunction with a special project (such as the visit to the League of Women Voters during the national elections workshop) and were sometimes used as an adjunct to theme-centered workshops.

COMMUNITY MEETINGS

Community meetings occurred once a week for 1½ hours and were attended by all participants and several staff members. These meetings were designed to enhance the sense of belonging and community among the participants. In addition, the community meetings provided a forum in which issues and announcements affecting the program and participants were discussed. These included discussions about "hanging out," the difficulties in being on time, keeping the facility orderly, how to make new participants feel welcome, and announcements of new program activities and interesting events around the city.

Educational games were also played. These included "treasure hunts" in which several questions were asked, the answers to which could all be found in the resource center;

and "password," in which teams of four participants were asked questions from curriculum and general knowledge areas. In addition, community meetings provided a forum for feedback from participants about the program. Participants were asked to evaluate their experience in the Learning Laboratory, how it was different from regular school, and how it could be improved.

INDIVIDUAL COUNSELING

Main teachers, the education counselor, and the teacher aide provided individual counseling to all participants. At the end of each cycle, a formal meeting was scheduled between each participant and his or her main teacher in order to evaluate progress and to develop an appropriate schedule for the coming cycle. Teachers also provided individual counseling to their clients when appropriate during a cycle. Counseling sessions often included an exploration of how the participants were using what they were learning outside of the classroom. The teacher aide and the education counselor provided followup and crisis counseling. In addition, the counselor assisted in resolving school problems and in clarifying future educational goals, and arranged for referrals to special education clinics, colleges, financial aid offices, and adult education courses.

4. Evaluation Methodology

Six modes of evaluation of individuals were employed, which enabled the staff, as well as the participants, to develop a more comprehensive diagnostic framework for assessing participants' strengths and weaknesses, their underlying as well as immediate problems, and their optimal learning styles. Since evaluation was viewed as a continuous process, the diagnostic framework and educational prescriptions were responsive to clients' needs and growth. Each evaluative modality is described below.

INTAKE INTERVIEWS

The intake interview served as an in-depth qualitative needs assessment. The interviews were divided into two sections: the psychosocial profile and the education profile. The psychosocial profile yielded basic demographic data, information on the young person's current living situation, his or her psychosocial history and family background, medical, psychiatric, and legal histories, and drug use patterns. In obtaining such information, initial insights were gained into possible underlying causes of the client's educational and drug problems.

The education profile covered factual information about the participant's educational history and current status, and elicited the young person's subjective assessment of school experiences and attitude toward learning. Through this exploration, likes and dislikes regarding the school experience were identified, as was individual interest in particular subject areas. Clients were also asked about their academic goals, their interpersonal life at school, and their perceptions of their problems, failures, and successes at school. This accomplished two important functions. First, in asking such questions, each young person began to realize that the staff was interested in his or her unique set of perceptions and not simply in objective achievement levels. Second, the responses to these questions informed the main teachers about the needs of their clients and enabled them to better assist the young person in establishing appropriate goals and schedules.

STANDARDIZED TESTS

A number of standardized achievement and diagnostic tests were selected and utilized. The Stanford Diagnostic Test, and Gray's and Gilmore's Oral Reading Tests were used to estimate instructional level and to diagnose reading problems. The Wide Range Achievement Test and the Metropolitan Achievement Test were used to assess basic verbal and mathematics skill levels. In some cases initial formal testing was postponed or bypassed entirely because of a participant's excessive test anxiety. Many youths had long histories of test failure, and some had developed such poor self-images that they simply assumed that they would do poorly on any test they took. More significantly, the staff was never entirely satisfied that the tests yielded an accurate representation of a participant's abilities. None of the tests was ever validated for an inner-city, largely minority population. On the other hand, tests did familiarize participants with standardized tests and testing procedures, which was helpful to those planning to take the G.E.D. and vocational training examinations.

MONTHLY EVALUATIONS OF WORKSHOPS

At the end of each month, workshop leaders wrote progress notes on each participant and entered them into the client's chart. These evaluations included an assessment of the participant's skills improvement, attitudes toward the subject matter and studying, the quality of workshop participation, and their patterns of attendance and punctuality. Monthly evaluations were particularly useful to the main teachers, who could, by consulting a client's chart, obtain a quick, reliable summary of a particular person's progress. In this way,

the main teacher could intervene at appropriate times to provide assistance or guidance to individuals who were having difficulty.

CLIENT JOURNALS

During orientation, participants were provided with a folder and forms for the purpose of keeping a daily journal of their workshop activities. Participants recorded the subjects they covered each day and what they planned to work on during the next session. They could also indicate how they felt about their progress or difficulties in the workshop. The client journals were, in essence, a sequential history of the participants' progress and served as concrete documentation of their educational accomplishments and progress. This is especially useful for young people who tend to deprecate their educational accomplishments and lose perspective on their progress and long-term achievements. Maintaining personal journals also reinforced participants' continued active participation in their own program.

EDUCATIONAL INDICES

The educational indices consisted of 10 items each rated on a 5-point scale. The items were developed to assess change in a wide range of attitudes and activities which were considered significant to a participant's progress. The breadth and depth of the educational indices, as contrasted with typical unitary measures of achievement, enabled the main teachers to develop a better understanding of the possible social and psychological factors involved in their client's learning problems and to gain a more comprehensive understanding of their client's educational needs.

Teachers were instructed in how to use the indices properly during their initial training period. A statistical assessment of the educational indices interrater reliability resulted in an acceptable range of reliability coefficients. The indices were administered after a young person's first month of participation in order to establish a base line, and every 3 months thereafter. These results were entered on the client's charts.

END-OF-CYCLE EVALUATIONS

At the conclusion of each 8-week cycle, the main teachers met with each of their clients individually for an in-depth evaluation of progress during the previous cycle. The young people reviewed their journals and were encouraged to critique their work during the cycle and to identify their strengths and weaknesses. Regular participation in their own evaluation helped participants to become more self-directed in their education choices. A principal source for this self-evaluation was the young person's workshop journal. The main teachers were as supportive as was therapeutically appropriate during the evaluation. After discussing the client's progress, the young person and the main teacher developed a schedule for the next 8-week cycle and set new short-term goals.

FOLLOWUP AND TERMINATION

There were three levels of followup: (1) followup when the participants were absent 2 or 3 days without notice, (2) followup when participants were absent for a prolonged period of time, and (3) followup of all the participants during the last months of program operation.

During orientation participants were instructed to call their main teacher if they were not able to attend a scheduled activity. When a person was absent and did not call, the main teacher or the teacher aide attempted to telephone the following day to inquire about the problem. If there was no answer, or the young person did not have a telephone, a short note was mailed expressing concern. Many participants were surprised that their absence had been noticed and often responded to these telephone calls and letters with appreciation of their teacher's efforts.

If a participant continued to miss scheduled workshops regularly and did not respond to either telephone calls or letters, further inquiries were made. In some cases main teachers, the teacher aide, or the counselor made house visits in order to contact the participant, learn the reason for the prolonged absence, and discuss whether she or he wished to return. If, despite these efforts, a participant remained absent for 1 month, she or he was officially terminated. However, the main teacher always made sure the participants understood that if they felt ready at a later time to reenter the program they would be welcomed back.

When a participant was officially terminated, a termination summary was written by the main teacher. This summary included the following information: the official termination date, a statement as to why the participant

first came to the program, a review of the services received by the participant and his or her responses to them, a summary of the participant's progress while active in the program, a statement of the participant's current educational, vocational, and living status, an indication of his or her drug use, an explanation of why the participant left the program, an assessment of the participant's unmet needs, and recommendations for future planning if the participant returned. The termination summary was used as a principal source of data in the evaluation of the program's effectiveness.

Finally, an attempt was made during 1978 to contact all people who had participated in the Learning Laboratory. Once contacted, they were invited back for a followup interview, or, if they could not come to the program, the interview was conducted by telephone. During the course of this interview, the clients were asked about their current living situations, their current educational and vocational involvements, and were asked detailed questions concerning their current drug use patterns. The clients were also asked how the program had helped them in each of these areas and about their present needs. Finally, they were offered assistance in accomplishing any goals they had specified or in resolving any problems they were experiencing. The three purposes of this followup interview were--(1) to maintain a record of the client's current drug use pattern, educational and vocational status, and living situation, (2) to obtain retrospective evaluations of the program, and (3) to offer additional services, when appropriate. Many young people were appreciative of this continued interest in them and responded favorably to offers of assistance.

In general, the followup and termination procedures were conceived of as therapeutic activities in which concern, rather than criticism, was offered. The followup efforts thus functioned to support the person's developmental needs, even if such support meant helping to find more appropriate agencies to meet these needs. It also enabled those people who were unable to participate successfully in the program to view their lack of success as a result of not being ready at that time in their lives for this type of program, rather than as another educational failure.

5. Client Characteristics

The Learning Laboratory was designed to meet the needs of youth between the ages of 12 and 21, with an emphasis on reaching older adolescents having already dropped out.

The participants ranged in age from 13 to 21, with a mean age of 17.9 years. Males outnumbered females three to one, which could be a reflection of the greater social pressure men feel to find employment. Interest in improving skills and increasing job opportunities was frequently expressed. Upon entry into the Learning Laboratory, 76 percent of the participants were not in school, 75 percent were unemployed (only 11 percent were employed full time), and 46 percent indicated they spent their time "hanging out." Nearly all of the participants were from minority ethnic groups; 56 percent were black, 34 percent Hispanic, 8 percent white, and 2 percent from other minority populations. All lived in the New York City metropolitan area.

LIVING ARRANGEMENTS AND FAMILY LIFE

A high incidence of broken homes and a generally unstable home environment characterized the Learning Laboratory population. Thirty-six percent of participants lived without either of their parents, and an equal percentage lived with one parent. Twenty-one percent of the Learning Laboratory participants stated at entry that they needed to move from their present residence and that they could not study at home. If they were living with their parents, youth in this category indicated that their relationships with their parents and siblings were unsatisfactory. Fifty-six percent of all participants had in fact left their family household at least once.

Most of the young people did not know their parents' occupation or salary, although 27 percent reported that their parents received public assistance. In addition, 69 percent of the parents had reportedly never reached or completed high school.

CRIMINAL JUSTICE INVOLVEMENT

Among the Learning Laboratory participants the rate of police contact was 49 percent, which is substantially higher than the 1976 juvenile rate of 11 percent for New York City (Police Department, City of New York, Youth Aid Division 1976). Most participants had been arrested but neither convicted nor placed in jail. Only 10 percent had been convicted and served time in prison, and another 11 percent had served time in prison but had never been convicted.

DRUG USE

The most frequently used drugs among the participants were marijuana, alcohol, and cocaine. Ninety-two percent of the participants had used marijuana during the past year, with the vast majority using marijuana several times per week or more. Sixty-five percent used alcohol during the past year, with 58 percent of these participants using alcohol at least once per week. Finally, 47 percent had used cocaine within the past year, with the majority of this group using cocaine at least once per week. The remainder of drugs used by the Learning Laboratory participants, varying in annual prevalence rates from 8 to 15 percent, included heroin and other opiates, methadone, barbiturates, amphetamines, hallucinogens, and psychotropics and inhalants.

Kovacs' (1975) system was adopted to infer the purpose(s) drug use served for the participants. Three-quarters of the young people used drugs in order to avoid unpleasant feelings, such as anxiety and depression. The next most prevalent reason was to avoid having to relate openly with others in situations that caused them anxiety (19 percent). Young people often reported that they used drugs prior to going to parties, before going to school, and before seeing their girlfriend or boyfriend.

TABLE 1.—Living arrangements and family life

Category	N	Percentage	Category	N	Percentage
Living arrangement	117		Family relations	106	
With one parent only		36	Cooperative		53
With both parents		28	Independent		19
With nonparent relatives		12	Competitive		18
Alone		9	Indifferent		10
Institution or group home		7			
With friends		6	Parental source of income	105	
Undomiciled		2	One or both parents working		65
Living situation	117		Public assistance		27
Stable		25	Do not know		8
Fairly stable		54			
Unstable		21	Parental education	96	
			Primary and/or junior high school		30
Family stability	116		High school		39
Parent marriage intact		34	Post-high school		22
Parent marriage not intact		64	Do not know		9
Do not know		2			
Reason left home	117				
Did not leave home		44			
Ran away		26			
Independence		14			
Thrown out		8			
Boarding school or adolescent residence		3			
Parental death		3			
Court ordered		2			

Looking at the participant's overt statements as to why they used drugs provides a similar picture. Forty-two percent indicated they used drugs to calm down or relax, 40 percent stated they liked to "get high" or "feel good," 22 percent said they used drugs when socializing, and 9 percent reported that they used drugs to avoid depression or boredom. Only 3 percent felt they used drugs from habit or because they were addicted. When asked how they felt before using drugs, 26 percent said they felt anxious and 26 percent said they felt depressed, lonely, or bored. On the other hand, 20 percent indicated that they felt "OK," and 19 percent said they felt happy or spiritual.

Seventy-eight percent of participants stated that a friend "turned them on" to drugs. This figure is consistent with nearly all previous surveys on this question (Goldstein 1975; Kandel 1973; Braucht et al. 1973; Johnston 1973; Goldstein et al. 1970). That drug use patterns are determined to a substantial degree by peer or friendship usage is reflected in the fact that 70 percent said that most of their friends used drugs. Twenty-three percent of the participants reported that only some of their friends used drugs, and 7 percent reported that none of their friends used drugs. Furthermore, 20 percent indicated that their parents used drugs (including alcohol), and 48 percent reported that their siblings used drugs (usually marijuana).

In light of the functions drugs served in the lives of the Learning Laboratory participants, it is not surprising that a majority, 52 percent, indicated that they did not initially desire to alter their drug use and that only only one in five had previously sought help for a drug "problem."

SCHOOL EXPERIENCE

Responses revealed that the young people performed poorly and generally disliked and were alienated from schools. Seventy-six percent had dropped out at an average age of 16 years. They had been out of school an average of 1½ years at the time of program

TABLE 2.—Drug use information

Category	N	Percentage
Reason for initiating drug use[1]	108	
Conforming with peers		78
Curiosity		23
Pressure from relatives		6
Reading and/or TV		2
Friends' use of drugs	111	
Most use drugs		70
Some or few use drugs		23
None use drugs		7
Family use of drugs[1]	113	
Parents use drugs		19
Siblings or relatives use drugs		48
None use drugs		39
Context of drug use[1]	113	
Positive/self		4
Positive/other		5
Negative/self		74
Negative/other		19
Stated reason(s) for maintaining drug use[1]	100	
Calm down or relax		42
Get high or feel good		40
Socialize		22
Relieve depression or boredom		9
Habit or addiction		3
Not sure		2
Feelings before using drugs[1]	91	
Anxious		26
Depressed, lonely, bored		26
Normal or OK		20
Happy/spiritual		19
Variable, depends upon drugs/self		10
Angry		4
Desire to alter drug use	101	
Yes		43
No		57
Sought help for drug use	107	
Yes		21
No		79

[1]More than one subcategory could be checked.

TABLE 3.—School experiences and perceptions of school

Category	N	Percentage	Mean	S.D.
			in years	
School status	117			
Dropout		76		
In school		17		
High school graduate		4		
G.E.D. or training program		3		
Age dropped out[1]	89		16.4	1.6
Years out of school[1]	89		1.6	1.5
Reason(s) for dropping out[1,2]	89			
Lost interest/direction		36		
Did not like school		26		
Drugs		21		
Family problems		20		
Suspended/expelled		18		
Other		18		
Emotional/medical		14		
Poor/failing grades		13		
Finances		12		
Grades last semester	110			
Passed all subjects		26		
Failed one or two courses		47		
Failed term		26		
Initial reading scores[3]	99		6.1	2.9
Initial mathematics scores[3]	80		5.6	1.9
Years of school completed	116		9.6	1.5

[1]Includes only dropouts from sample.
[2]More than one subcategory could be checked.
[3]Scores reported in terms of grade-equivalent scores.

entry. Of those still in school, 55 percent had failed at least one course in their last semester. The mean reading and math scores for all participants were 6.1 and 5.6 (grade-equivalency scores), respectively, yet they had completed almost 10 years of schooling.

Among those who dropped out of school, the two most common reasons given for dropping out were "losing interest/direction" (36 percent) and "didn't like school" (20 percent). When asked specifically what they did not like about school, the most frequent responses were: the teachers (21 percent), the fact that they had to conform to school rules (18 percent), and that the social life was "bad," often referring to violence in the schools or to gangs (14 percent). Almost a quarter of the participants (23 percent) said they did not talk with anyone at school, and 59 percent said they only spoke to friends in school. When asked if they had a particular teacher or counselor they could talk to, 44 percent said no.

The young people were also asked when they liked school most. The highest percentage liked school best during their elementary school years and least during their high school years. When asked how school had changed, the most common responses were

that there was more and excessive pressure to learn as they progressed in school and that they themselves had changed or simply lost interest in school. Paradoxically, as the pressures mounted and as they became more alienated and less motivated, the young people felt they had fewer and fewer school personnel they could turn to.

Despite negative experiences in a school environment, 77 percent of the participants indicated that they enjoyed learning, and another 22 percent said that they enjoyed learning under some circumstances. In specifying what they perceived to be their biggest obstacle to learning, self-blame was most frequently mentioned (51 percent). Respondents indicated that they "were lazy," "couldn't concentrate well," or "just lost interest."

6. Evaluation of Progress

Ongoing evaluation of each client's progress was conducted using the participants' journals, monthly and end-of-cycle evaluations, and quarterly educational assessment indices. Pretest data based on initial interviews were compared to posttest data derived from termination summaries and followup interviews. Followup information was gathered on 54 young people who had remained in the program for at least 3 months. The data distributions of the followup sample and a nonfollowup sample (63 clients who also participated in the program a minimum of 3 months but who could not be contacted) were compared, and it was determined that the two groups were similar. Chi-square tests for categorical data and t-tests for continuous data were applied to every variable which conformed to the assumptions of each test. Of the 50 variables examined, only 4 were statistically significant. The followup sample scored higher on "constructive interaction with staff" and on "ability to follow through," and the nonfollowup sample had favorable scores on the other two variables; their "family members were less involved with drugs" and they were more likely "to commence drug use because of peer conformity." Given the inconsistencies of these results and the fact that the great majority of variables did not reach statistical significance, all findings reported here can be generalized to the entire Learning Laboratory population.

EDUCATIONAL OUTCOMES

Three related measures were combined to assess participant's educational outcomes: (1) the degree to which they had met stated short-term goals at termination; (2) the degree to which they had met long-term goals at followup; and (3) their educational involvement at followup. One additional measure of educational impact, independently examined, was the young people's subjective perception of if and how the Learning Laboratory furthered their educational achievement.

At the end of the orientation period, clients worked with a teacher to select short- and long-term goals. Not all goals were directly related to raising achievement levels and improving study skills. Goals were also related to reducing drug usage and improving interpersonal relationships with peers and parents.

The termination summary report provided sufficient information to rate the degree to which clients met their short-term educational goals. A four-part scale was adopted to make the assessments. Rater reliability was assessed by having 2 judges independently rate 20 randomly selected charts. The reliability coefficient of r=0.86 (Pearson's Product-Moment Correlation) was acceptable (Anastase 1968). A similar procedure was used to assess long-term educational goals. The two raters again concurred in their assessments (r=0.79).

Educational involvement was assessed at followup. It was learned that 43 percent of the clients were currently involved in educational activities. This compared favorably to the 20 percent that Kempt (1976) found in a similar followup study of dropouts in Philadelphia. Furthermore, 17 percent of the Learning Laboratory participants were attending college at the time of followup.

The three measures of educational outcome were then combined into a single measure. The educational outcome level scale provided a means for comparing the educational progress of clients based on an individualized measure of the young people's accomplishments toward meeting their goals. Sixty-nine percent of participants had some success in achieving their initial golas.

The relationship between achievement test scores administered during the orientation period and educational outcome scores was examined to assess the degree to which incoming achievement levels accounted for the sample variance. Reading scores did, in fact, account for 20 percent of the variance (r=0.45), while mathematics scores accounted

TABLE 4.—Educational outcome level and its relationship to selected variables

Educational outcome level	Percentage (N=54)	Mean reading (N=51)	Mean math (N=41)	Mean education indices (N=53)	Mean no. months in program (N=54)
4	22	8.7	6.4	3.0	9.8
3	17	7.3	4.4	2.9	5.6
2	30	5.8	5.9	2.6	7.6
1	31	5.0	5.4	2.0	5.8
r=[1]		[2].45	.10	[2].50	[3].28

[1]The correlations were based upon the raw "scores" of the independent variables.
[2]$p < 0.01$.
[3]$p < 0.05$.

for only 1 percent of the variance (r=0.10). Therefore, initial academic capability and reading achievement did predict to some extent subsequent educational outcomes.

The mean educational index of each participant was examined in relation to his or her educational outcome level. Ten educational indices were developed to provide a broad-based and ongoing evaluation of the participants. The indices ranged from "active involvement in planning educational program" to "self-concept as a learner" and "consistency of involvement." Each index was rated on a one-to-five scale by the person's main teacher. Interrater reliability was adequate, ranging from 0.50 to 0.80, with a mean correlation of 0.63 (Kendall's w). The "mean educational index" referred to above is the average rating each participant received after 1 month of participation in the program. The mean educational index (table 4) accounts for 25 percent of the variance in educational outcome (r=0.50) level. That this variable accounts for a greater proportion of the variance than does reading achievement is probably due to the breadth of educationally related issues it covers. As such it is the best individual predictor of education outcome level.

The final variable examined, mean number of months in the program, was somewhat related to educational outcome level but accounted for only 8 percent of the variance in educational outcome level (r=0.28). To further assess the relationship between length of participation and educational outcome, a chi-square analysis was performed to supplement the correlation analysis. Those who remained in the program 3 to 6 months were compared to those who stayed 7 months or more in terms of whether they achieved an educational outcome level score of 3 or 4 (top half), or an educational outcome level score of 1 or 2 (bottom half). The analysis revealed that those who stayed in the program longer did not score significantly better or worse than those who stayed in the program less time. It appears that young people can benefit from short-term as well as from long-term involvement in the program.

Only 2 percent of the young people did not perceive their experience in the Learning Laboratory as educationally beneficial. Eighty percent felt it had helped raise their skill level, and 63 percent felt they had benefited from counseling. This latter perception is important when contrasted with the 44 percent of the participants who had previously stated they had no particular counselor or teacher they could talk to while in high school.

PURPOSEFUL ACTIVITIES

A four-point scale was developed to reflect the extent of involvement in purposeful activities. Purposeful activities were defined to include part-time employment and/or

TABLE 5. —Perception of Learning Laboratory as helpful in furthering educational achievement

Type of help	Percentage (N=54)
Raise skills	80
Counseling	63
Direct referral	15
No help	2

NOTE: Respondents were permitted to indicate more than one way in which the Learning Laboratory helped to further their educational achievement.

part-time schooling or training. The relative stability of the individual's living situation was also incorporated into this scale because it was felt that an unstable living situation exacerbated the participant's alienation and depressed the already weakened motivation to try to "make it."

As can be seen from table 6, the extent of the participants' involvement in purposeful activities changed markedly from time of entry to followup. The percentage of participants who were engaged in at least part-time purposeful activities increased from 52 percent to 81 percent. Conversely, 48 percent were not engaged in any purposeful activity at time of entry, while at followup only 19 percent were not engaged in any purposeful activity. In addition, the percentage of those engaged in full-time activities jumped from 28 percent at entry to 50 percent at followup. Not shown in the table, but relevant here, is the fact that 52 percent of the participants were employed at the time of followup; 30 percent were employed full time.

TABLE 6.—Purposeful activity level (percentage)

Level of activity	At entry	At followup
1. Positive full-time activity Stable living situation Adequate finances	24	39
2. Positive full-time activity Stable living situation In need of money	4	11
3. Positive part-time activity Stable or fair living situation In need of money	24	31
Total percent demonstrating significant purposeful activity	52	81
4. Either: No positive activity and Stable or fair living situation Or: Unstable living situation	48	19

(N=54)

TABLE 7. —Program was helpful in furthering vocational involvement

Type of help	Percentage[1] (N=54)
Counseling	46
Direct referral	12
Raising skills	6
No help	44

[1]Respondents could indicate more than one category.

These figures compare favorably with other available data. Kempt (1976) found that only 26 percent of the Philadelphia dropouts he had studied were employed at the end of 1 year, and nearly half were not engaged in any purposeful activity.

The philosophy of the program was that education, especially for this population, should go beyond mere academic skill enhancement to include such basic components as helping the young people to overcome their histories of failure and their negative views of themselves, and to learn to work cooperatively with others. Table 7 indicates that participants perceived that the Learning Laboratory had helped further their vocational involvement, mostly through counseling.

DRUG USE CHANGE

Table 8 reveals that 50 percent of the participants decreased their drug use, 48 percent showed no significant change, and 2 percent increased their drug use. More specifically, 2 percent shifted from minimal to no drug use, 22 percent shifted from frequent use of soft drugs to minimal or no drug use, 11 percent shifted from some hard use to minimal or no drug use, 15 percent shifted from some

TABLE 8.—Change in drug use from program entry to followup

Type of change	Percentage (N=54)
From minimal drug use	
To no drug use	2
To regular soft drug use	2
From regular soft drug use	
To minimal or no drug use	22
No significant change	37
From regular hard drug use	
To minimal or no use	11
To regular soft drug use	15
No significant change	11
Total decreased drug use	50
Total no change	48
Total increased drug use	2

hard use to frequent soft use, and 2 percent shifted from minimal use to frequent soft use. These findings contrast sharply with the age trends reported in the adolescent drug use literature, which is consistent in reporting that drug use increases with age during the adolescent years (Carman 1973; Wechsler and Thum 1973; Johnston 1973; Josephson et al. 1972; Kandel 1975; Blackford 1974; Wolfson et al. 1972; Berg 1970).

SUMMARY

Program effectiveness was examined in terms of progress made along three dimensions: educational progress, extent of involvement in purposeful activities, and drug use change. The analyses were based on comparisons of the participant's status at entry and at followup. Within each dimension positive and significant progress was found to have occurred. In terms of educational progress, 43 percent of the participants were involved in education or training programs at followup, 69 percent were at least moderately successful in achieving their initial educational goals, and 98 percent of the participants considered the Learning Laboratory to have been helpful in furthering their educational achievement. There was a 30 percent increase in part-time purposeful activity levels, and a twofold increase in the number of young people employed. Fifty-six percent of participants felt that they had been helped in furthering their vocational involvement. In the area of change in drug use patterns, 50 percent of the participants decreased their drug use and 2 percent increased their drug use.

7. Predictors of Success

Operational definitions of success and failure were established in order to determine which variables or characteristics, if any, discriminate the successful from the not-so-successful participants. The purpose in doing this is twofold. First, such characteristics can be used to identify which problems the program was best and least equipped to ameliorate. Second, such information can be used in altering the admittance procedures or in suggesting programmatic modifications for future programs of this kind.

CRITERIA FOR SUCCESS

In establishing criteria for success, the three outcome areas could be examined separately or combined into a single composite measure. The composite measure was chosen for two reasons. First, there were young people who succeeded in one outcome area but who did not do well in another area and could therefore not be considered successful or unsuccessful from a holistic point of view. Second, it was desirable to use the purest measure of success and lack of success so that the variables which were found to discriminate significantly between the two samples would be maximally valid. Since the sample was not large enough for the application of multivariate analyses such as multiple regression or discriminate analysis, t-tests were used to assess the differences between the sample means along each continuous variable; chi-square analysis was applied to distributions of the sample for discontinuous variables.

COMPARISON OF THE SUCCESSFUL AND NOT-SO-SUCCESSFUL PARTICIPANTS

The composite success classification system is presented below. Since approximately one-quarter of the participants were categorized into success and lack-of-success groups, they will be referred to henceforth as the top quarter (TQ) and the bottom quarter (BQ) groups.

Having defined the TQ (N=13) and BQ (N=12) groups, all variables which might differentiate the two groups were examined. A total of 37 variables were examined, ranging from the number of years the participants were out of school at program entry to the degree to which their friends used drugs. Of these 37 variables, 29 met the assumptions of either the t-test or chi square.

The TQ and BQ groups were found to be significantly different in terms of six variables. It should be pointed out that the direction of differences between the 2 groups on the remaining 31 variables are, with some minor exceptions, consistent with the literature and with commonsense assumptions. For example, 67 percent of the BQ group had been arrested, while only 31 percent of the TQ group had been. Dropouts traditionally have more police contact than do youths who have not dropped out (Schreiber 1964).

There were fewer dropouts among the TQ than the BQ group (77 percent as opposed to 83 percent); the dropouts among the TQ group had been more successful while in school than the BQ-group dropouts. The dropouts among the TQ group left school at an older age (17.1 as opposed to 16.0 years), had finished more years of school (10.1 as opposed to 9.2 years), and had been out of school for less time (1.15 as opposed to 1.25 years) than the BQ-group dropouts. Verner and Davis (1963) found that the longer the school interruption of dropouts, the less likely they were to complete resumed education programs. Furthermore, those in the TQ group, whether or not they had dropped out, had failed courses in their last year of school less frequently than had those in the BQ group (64 as opposed to 100 percent). This latter finding is consistent with research indicating that among dropouts who return to educational programs, those who do best had better grades while still in school (Saleem and Miller 1963; Kohen and Barker 1976; Wehrwein 1970; Hess 1966).

The TQ-group members were more self-confident, felt they learned more quickly, felt they were working closer to their potential, and were more satisfied with their performance in school. It should be remembered, however, that these measures were taken during orientation and therefore anticipate, rather than reflect actual performance. The findings are consistent with previous studies which indicate that dropouts, as contrasted to graduates, have low self-esteem (Ahlstrom and Havighurst 1971; Thornburg 1971, 1975; National Education Association of the United States 1965). Friends of the TQ group were less consistently perceived as using drugs; they "hung out" less, and were perceived as having generally more favorable attitudes toward school than were friends of the BQ group. A number of studies have reported similar findings with regard to the friends both of drug users and dropouts (Adler and Joteca 1973; Saleem and Miller 1963; Johnston 1973; Goldstein 1975; Elliot and Voss 1974).

Conversely, the TQ group experienced their parents as less supportive, had left home in greater numbers, and had parents who had fewer years of formal schooling. Several studies have found these and related variables to discriminate between drug abusers and nonusers and between dropouts and graduates (Wechsler and Thum 1973; Adler and Joteca 1973; Mechan and Mink 1970; Cervantes 1965; Johnston 1973). Other studies of adolescent drug abuse and of dropouts, however, have found parental and familial influences to be less potent than peer influences (Elliot and Voss 1974; Kandel 1973).

Of the whole range of 37 variables, the educational indices as a group best discriminated the TQ from the BQ group. All differences were in the expected direction, and 5 of the 10 indices were found to be statistically significant: constructive interaction with the staff, consistency of involvement, active participation, self-directedness as a learner, and ability to follow through. These indices were taken 1 month following entry into the program. The main teachers, therefore, through use of the educational indices, were able to identify who was making significant progress and who was having trouble before the outcomes were known. These indices can be exceedingly useful in identifying, at a very early stage, those people who need more intense tutoring and counseling or further evaluation for possible referral.

The remaining significant variable was reading achievement score at entry. (Mathematics achievement score differences were in the expected direction but not significantly so.) That reading scores discriminate these two groups is not surprising because a minimal reading competency is required for success in almost any life endeavor. In fact, no member of the TQ group had a reading score below 3.0, while several members of the BQ group fall below this mark.

CLIENTS WHO ENTERED BUT STAYED FOR LESS THAN 3 MONTHS

Participants (N=43) who stayed active in the program for less than 3 months were considered unsuccessful. Unfortunately, the staff was unable to contact many of these young people for followup, and of those reached, only two or three were willing to participate in a followup interview. There were, however, 12 (28 percent) participants who were active far less than 3 months for whom profile data were complete. This made it possible to compare these participants with the TQ and BQ groups.

These comparisons, however, did not prove to be revealing. On most variables, including 9 out of 10 educational indices and both the reading and mathematics achievement scores, the young people who stayed less than 3 months were distributed between the TQ and BQ groups without being significantly different from either group. This group generally appeared to have neither a better nor a worse prognosis than both the TQ and BQ groups. The only variable in which this group consistently differed from the TQ and BQ groups was school involvement. There were more dropouts among this group (92 percent as opposed to 77 and 83 percent, respectively, for the TQ and BQ groups); they had left school at an earlier age (15.4 years as opposed to 17.1[1] and 16.0 years for the TQ and BQ groups); and they had been out of school longer (2.91 years as opposed to 1.15[1] and 1.28[1] years).

These results could be interpreted to mean that this group of young people were of average capability in relation to the entire Learning Laboratory population, but that reentry into an educational setting represented a greater commitment than they were capable of making. Perhaps their lives were in such disarray that they needed to develop basic support systems before reentering an educational program. Reinforcing this conjecture is the fact that 42 percent were experiencing

[1]These figures are significant at the 0.05 level.

TABLE 9.—Composite success classificatory system

	Education		Purposeful activities		Drug use	
	Code	Description	Code	Description	Code	Description
Top quarter (TQ) Must receive only those codes indicated on this level	4	No worse than 3 on short- and long-term goals and current educational involvement	4	Positive, full-time activity; stable living situation; finances OK	3	From minimal drug use or regular soft drug use to minimal or no drug use
	3	Either: average of 3 or more on short- and long-term goals and no educational involvement Or: pattern of 3, 2 or 2, 3 on short- and long-term goals and educaal involvement	3	Positive, full-time activity; stable living situation; in need of money	4	From regular hard drug use to minimal or no drug use
					5	From regular hard drug use to regular soft drug use
					(2)	Regular soft drug use with no significant change--only if combined with a 3.5 code average on education and purposeful activities
Bottom quarter (BQ) Must receive only those codes indicated on this level	2	Either: pattern of 3, 2 or 2, 3 on short- and long-term goals and no educational involvement	2	Positive, part-time activity; stable or fair living situation; in need of money	2	Regular soft drug use to regular hard drug use or regular soft drug use with no significant change
		Or: pattern of 1, 2 or 2, 1 on short- and long-term goals and educational involvement	1	Either: no positive activity and stable or fair living situation Or: unstable living situation	6	Regular hard drug use with no significant change
	1	Average of 1.5 or less on short- and long-term goals and no current educational involvement			7	From minimal drug use to regular soft drug use
					(5)	From some hard drug use to regular soft drug use--only if combined with code average of 1.5 or less on education and purposeful activities

serious problems such as illness, pregnancy, or legal hassles at the time they left the program.

SUMMARY

An index of success was constructed by combining the educational, drug change, and purposeful activity participation outcome indices. The members of the followup sample who scored highest on the composite success measure were compared with the members who scored lowest. These subgroups were named the top quarter (TQ) and the bottom quarter (BQ). For the most part these groups differed, though not significantly so, in ways consistent with the literature. The TQ group was found to have better educational records, higher self-esteem, and friends who were more positively oriented toward school and less involved with drugs. The BQ group, however, consistently rated their family life as more supportive and stable than the TQ group, perhaps indicating that family life in itself may not be as significant as often reported.

8. Need for Supplementary Services

This chapter will focus upon those problems requiring supplementary services, which the Learning Laboratory, as it existed, was not designed to provide. Two sources of data were employed. First, the termination summaries were examined to determine the reasons the participants left the program; second, the needs of the participants, as of late 1977, were examined utilizing the followup reports. The sample for these analyses consists of the 54 young people who were interviewed for followup and who had participated in the Learning Laboratory for at least 3 months. This is the same sample which was employed for the analyses of the program's effectiveness. As noted earlier, this sample does not differ significantly from the population as a whole, and thus the results can be generalized to the entire Learning Laboratory population.

REASONS FOR LEAVING

Each participant's main teacher wrote a termination summary in which the young person's involvement in the program was reviewed and the reasons for leaving were described. The reasons given for leaving are based upon the teacher's educated interpretation of the stated, and in some cases unstated, reason(s) for leaving. For example, if a young man stated that he was leaving because of loss of interest in the program, but his teachers knew that he was under pressure to get a job, the latter reason would be indicated.

The reasons for leaving fell into roughly eight categories. In many cases a person left for more than one reason, and this was so recorded. In order to insure rater reliability, 2 judges independently coded the reasons

TABLE 10.—Reasons for leaving

Reason for leaving[1]	Percentage
Personal/emotional problems, apathy, lack of discipline	69
Financial problems, found job, looking for job, inadequate housing	48
Social or peer problems	24
Family problems	17
Frustration at making too little progress	10
Pursuing further education	7
Severe drug problems	5
Legal problems	5

[1]The mean number of reasons per participant is 1.8.

NOTE: N=42. Six participants were terminated because the program closed before their treatment could be completed, and six participants left having only minor problems.

for leaving for 20 randomly selected participants. The category selections of both judges overlapped at a rate of 65 percent. This rate of overlap, which is adequate to establish reliability, was based upon the number of category assignments in which both judges agreed divided by the total number of category assignments made by both judges.

Personal/emotional problems were cited by 69 percent of the participants as the reason for leaving the program. These young people often stated that they felt very confused, did not have a stable sense of who they were, and were unclear about the present direction of their lives. They were in most cases so overwhelmed by their problems that they were unable to benefit from counseling efforts or referrals on their behalf, and could not devote their energies to the tasks required of them at the Learning Laboratory.

The next most frequently cited reason for leaving (48 percent) was financial problems. Financial pressures were often so severe that the person could no longer afford the "luxury" of learning to read better and of studying for the high school equivalency examination. These young people often had financial obligations and simply had no viable options other than devoting their time and energies to finding and maintaining a job. A number of the participants became too impatient to spend months in academic pursuits before seeing any monetary rewards. In addition, once their skill level was elevated and they began feeling more confident of themselves, some of the participants left the program to look for a job.

That jobs and job training were high priorities is reflected in the popularity of the prevocational skills workshops which were offered. Basic electricity and introductory electronics were offered by volunteer representatives of the Xerox Corporation, and several basic bookkeeping workshops were provided by volunteers from Arthur Young and Company. Announcements of these workshops met with enthusiastic responses, despite homework and minimum basic skill requirements. In fact, those who were accepted in the prevocational skills workshops became noticeably more motivated to improve their basic academic skills.

Nearly one-fourth of the participants cited peer pressure as the reason for dropping out. Faced with negative peer pressures, their motivation to struggle toward initial educational goals was often diminished to the extent that they gradually stopped coming to the Learning Laboratory.

Family problems accounted for 17 percent of the dropout rate. These problems ranged from having an unstable home situation created by hostility and competitiveness among family members to family pressures to "make money" rather than "just study."

PRESENT NEEDS

Nine categories of "present needs" were developed based on information gathered during the followup interview. Reliability was assessed by the amount of overlap in the category assignments of 20 randomly chosen young people by 2 independent judges. The overlap rate of 82 percent was more than adequate to establish reliability. The overall distribution of present needs is presented in table 11.

Sixty-one percent indicated a desire to further their educational training. Many who had not obtained their G.E.D. wished to study further in order to do so. Others had gone back to high school after having dropped out, and still others had plans to pursue a college education.

Exactly half the young people indicated that they were looking for employment and/or that their level of income was inadequate. Furthermore, 43 percent expressed a desire to secure vocational training. The employment outlook for this population is dismal, and concommitant financial needs are great. Skills training appropriate educational programs and counseling are needed and are perceived as such by the young people.

Young people were categorized as needing drug counseling if they stated that they wished to decrease their drug use, if they felt their drug use interfered with their functioning, or if they were currently seeking help for their drug problems. This expression of need for drug counseling by 35 percent of the participants is heartening because of the continuing, though reduced, drug use reported in the followup interviews. It appears that despite significant reductions in their drug use patterns, the young people remained aware of the negative impact drugs can have upon psychological and educational development.

The explanation for the 31 percent rate of medical and nutritional problems is unclear. Economically disadvantaged youths are considered at risk with regard to medical and nutritional problems (Sterne 1978), and perhaps awareness of such problems indicates an improvement in self-awareness and self-esteem.

TABLE 11.—Present needs

Need description	Percentage
Further education	61
Financial need	50
Vocational training	43
Drug counseling	35
Medical and nutritional needs	31
Legal counseling	17
Counseling toward goals	15
Family counseling	11
No significant needs	11

NOTE: N=54. Mean number of responses is 2.7.

The 17 percent who cited legal problems is understandable given the high rate of criminal justice contact for this population.

"Counseling toward goals" included expressions of confusion by a young person about his or her future or identity. The 15 percent who needed goal-oriented counseling represents a marked improvement when compared to the overall status of the clients at program entry.

Finally, 11 percent of the young people expressed the need for family counseling, and 11 percent indicated that they had no major problems. Again, these figures reflect major gains in the population as a whole. A high percentage of these people had family problems at program entry, and almost all had major problems of some sort.

SUMMARY AND IMPLICATIONS

The overriding recommendation that can be made is that vocational skills training and psychological counseling be integrated into future programs of this sort. Financial need and interest in vocational skills training loomed large both in the reasons for leaving and in statements of present need. These facts support the adoption of a policy in which stipends are provided to financially needy participants, in addition to the emergency transportation fund which was available.

Second, more extensive psychological counseling should be made available. Sixty percent of the participants left because of personal problems. Despite the existence of the Learning Laboratory's strong support system, this was not sufficient to meet the needs of the participants. These young people may have been better served in a residential or full-day, less flexibly structured program. It was difficult to remain committed to a learning program for 3 months or more, and the students probably needed a respite after several months' involvement. At the time of followup, 60 percent planned to or were pursuing further education. One of the strengths of the Learning Laboratory was that people were not made to feel like failures if they were referred out or left the program on their own. Participants were always told they could return if they wished to. Some people did, in fact, leave for a month or two and then resumed active participation. Others, as can be seen from the high rate of "current educational involvement," entered other education programs after leaving.

The multifaceted alienation which existed when the young people entered the Learning Laboratory was greatly diminished. After participating in the program the young people seemed much more positively oriented toward education and educational institutions, and the degree and extent of family problems were reduced. Alienation from the economic mainstream, however, still persisted.

9. Significance and Recommendations

SIGNIFICANCE

Education as a Drug Treatment Modality

The Learning Laboratory provided evidence that a holistic and individualized education program can serve as an effective treatment modality for drug-abusing youths. Fifty percent of the participants terminated or significantly reduced their drug use, and only 2 percent followed the normative trend of increasing their drug use. Furthermore, the participants made significant educational progress and became increasingly involved in purposeful activities such as vocational training, employment, and further schooling.

Using the Learning Laboratory as a Model

The content and format of the program were designed to be easily incorporated into the public school system. Examples of components which could be incorporated into existing educational programs include (1) the introduction of workshops geared to the immediate needs of inner-city youths, such as values clarification, decisionmaking, and prevocational activities; (2) the provision of more opportunities for active and meaningful participation by students in their education; (3) the building of effective linkages with agencies and institutions outside the school that could provide supportive services and resource personnel to conduct special in-school workshops on topics such as legal rights of minors, sexuality, and family planning; (4) ongoing inservice training for teachers and counselors to fill the gaps in their professional training; and (5) introduction of more comprehensive evaluations of students to facilitate more accurate assessment of strengths, weaknesses, and progress, as well as to serve as a basis for individualized treatment planning.

A Comprehensive Approach to Evaluation

The comprehensiveness with which clients' participation was evaluated and the degree to which clients contributed individually to their own evaluation helped to diminish commonly experienced feelings of alienation, fragmentation, and confusion. This approach also proved effective in identifying underlying factors involved in the participants' drug abuse and educational problems, and provided a substantial basis for developing effective individualized treatment plans. Six distinct evaluative modalities were employed, including client-maintained journals, end-of-cycle evaluations, and diagnostic educational indices. Attitudes, habits, interpersonal skills, values, and academic skills were all considered relevant components of the educational process.

Orientation of Program Materials and Components

The diversity of learning activities and educational materials incorporated into the Learning Laboratory program maximized the range of learning styles and academic problems that could be accommodated. The learning activities were organized into five general areas ranging from individualized basic skills workshops to community meetings and special projects on topics of particular interest to adolescents. The areas of study within the various components included values clarification, black studies, Spanish, consumer advocacy, mathematics, and reading. Efforts were always made to collect materials that were relevant to the lives of inner-city youths; some materials, such as subway maps and application forms, were drawn directly from the everyday activities of the participants.

The Orientation Period and Individualized Scheduling

The 2-week orientation period provided an opportunity for the young people to meet the staff and to participate in the various components of the program without having to make immediate commitments which they were often unprepared to make. The orientation period also enabled the young people to start gradually to develop a sense of belonging and to become familiar enough with the program to be able to begin to participate actively in the development of a learning treatment plan. Individualized scheduling made it possible for clients to establish schedules and make commitments that were realistic, and it also gave them an opportunity to experience early achievement and a sense of direction.

Role of the Main Teacher

Each staff person providing instructional services was assigned to be the main teacher to several participants. Main teachers served as the primary counselors and advisors to their clients. They met regularly with their clients to provide feedback about progress, to discuss problems related to their program or other aspects of their lives, and to provide referrals when needed.

The one-to-one relationship between the participants and the main teachers provided the stability the clients needed to develop a trusting relationship with a mature and concerned adult. This, in turn, enabled the staff to provide effective supportive counseling and at the same time challenge their clients to work to their fullest capabilities.

Staff Training

Gaps in the professional training of teachers were identified and discussed, and appropriate ongoing training was provided. Areas focused upon included the psychological dynamics of adolescents, drug abuse, record-keeping, organization skills, human relations, communications, and needs assessment. The staff training also helped to promote communication among the staff and to function better as an integrated team.

Research Design

The research design of the evaluation was grounded in the philosophy and treatment objectives of the program and resulted in an exploratory analysis of how well these objectives were satisfied. The research pointed to specific ways in which the Learning Laboratory and similar programs could be strengthened. Furthermore, the research demonstrated how the participants' concrete accomplishments, such as securing employment, reducing drug use, and successfully continuing their educations, could be incorporated into statistically analyzable outcome measures.

RECOMMENDATIONS

The following recommendations, divided into service-related and research-related areas, are suggested as helpful additions and modifications for programs having treatment objectives similar to those of the Learning Laboratory.

Additional Needed Services

Financial and vocational needs. Vocational skills training workshops would be beneficial to such programs. Much interest in vocational training was expressed among the participants, and many experienced severe financial need. Due to their very low skill levels, most participants were unable to gain admission to established vocational training programs. In addition, stipends, provided on an as-needed basis, would help to reduce the financial hardships with which many participants were burdened.

Psychological counseling needs. The need for psychological counseling was expressed, both indirectly and directly, by many participants. This service could be provided by an in-house psychologist, who could also help to identify those young people who would be unlikely to benefit from such a program because of serious psychological problems.

Learning disabilities specialist. Several low-level readers could have benefited from the services of a learning disabilities specialist. This teacher could provide appropriate tutoring and small-group work, and could also conduct initial diagnostic assessments to determine if participants having very serious learning problems could be more appropriately served at specialized clinics.

Suggested Additions to and Modifications of Research

Followup. The validity of the followup interview could be enhanced by the use (with the permission of the clients) of independent non-clinical confirmants. Validity could also be enhanced by conducting the followup interview at fixed intervals dated from each client's official termination date.

Multivariate analyses. With the enlargement of the sample size, multivariate analyses could be employed to determine which client-related variables or set of variables best accounted for each of the successful outcome measures. Also, multivariate analyses, with a larger sample and more precise documentation, could help to pinpoint which program components or set of components were most effective.

Measures of affective development. Reliable and valid measures of self-esteem and other dimensions of affective development, should be developed to assess progress made by the participants. Affective development is commonly recognized as a significant component in any therapeutic process, but remains quite difficult to assess.

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Appendix A

Statistical comparisons of the top-quarter (TQ) and bottom-quarter (BQ) groups

Category	N (TQ)	N (BQ)	Chi square	Degrees of freedom	$\bar{X}$ (TQ)	$\bar{X}$ (BQ)	t
Length in program (months)	13	12		23	8.2	6.1	1.26
Family relations (cooperative vs. noncooperative)	12	12	0.17	1			
Parental support	10	12		20	1.5	1.3	.53
Parental influence	10	12		20	2.1	2.0	.29
Marriage intact	13	12	.03	1			
Parent education	13	11		22	1.8	1.9	-.21
Desire to change drug use level	13	10	.06	1			
Time spent hanging out	13	12	.05	1			
Age dropped out	10	10		18	17.1	16.0	1.17
Last grade completed	13	12		23	10.1	9.2	1.43
Years out of school	10	12		20	1.2	1.3	.13
Grades last year	11	11		20	2.3	2.2	-.27
Enjoy learning	13	12		23	1.0	1.2	.23
Self-evaluation							
Self-confidence	13	10		21	3.7	3.7	.02
Rate of learning	13	10		21	3.4	2.8	1.04
Satisfaction with school performance	13	10		21	2.5	2.4	.31
Working to potential	13	10		21	3.0	2.0	1.99
Reading scores	12	12		22	7.2	4.6	[1]2.20
Mathematics scores	9	11		18	6.2	5.5	.88
Educational indices							
Awareness of learning difficulty	13	12		23	2.8	2.2	1.45
Active involvement in planning educational program	13	12		23	2.8	1.9	2.03
Constructive interaction with staff	13	12		23	3.4	2.2	[2]2.93
Attitude toward educational program	13	12		23	3.4	2.5	1.98
Consistency of involvement	13	12		23	3.0	1.4	[2]2.83
Active participation in educational program	13	12		23	3.1	2.0	[1]2.62
Facility in education program	11	8		17	3.1	2.4	1.26
Self-concept as a learner	13	12		23	2.8	2.3	1.21
Self-direction as a learner	13	12		23	2.5	1.7	[1]2.54
Ability to follow through	13	12		23	2.9	2.0	[1]2.41

[1]Significant at $p < 0.05$.
[2]Significant at $p < 0.01$.

Appendix B

School experiences and perceptions of school

Category	N	Percentage
Disliked aspect(s) of school	114	
Teachers		21
Rules		18
Social life		14
Failing/frustration		11
Particular subject		11
Grades and tests		9
Nothing		8
Other		7
Large classes		4
Everything		3
Liked aspect(s) of school	114	
Learning in general		24
Social life		24
Nothing		20
Particular subjects		14
Gym/sports		11
Other		10
Play around/hang out		4
Field trips		4
Teachers		3
When liked most	102	
Grade school		45
Junior high school		28
High school		15
Never		12
All the same		7
Vocational school		2
Enjoy learning[1]	115	
Yes		77
Sometimes		22
No		1
General areas of interest	114	
Creative arts		41
Sports		32
Science/math		26
Reading/literature		18
Career skills		16
Life/self		12
G.E.D.		12
Other		12
History		4
Do not know		3
Want to learn in school	114	
Science/math		39
Career skills		21
Reading/literature		20
Creative arts		18
Life/self		16
History		8
Other		7
Sports		4
What aspect(s) of school changed	110	
More excessive learning pressure		24
Reference to self		24
Nothing changed		19
Social life		15
Teachers		10
Class shifting		4
Other		3
More learning		2
More and excessive rules		2
Largeness/isolation		2
Who talked to in school	113	
Friends		59
Teachers		32
No one		23
Counselors		20
Particular teacher/counselor to talk to	111	
Counselor		27
Teacher		12
Out-of-school counselor		19
No one		44
Obstacles to learning	117	
Reference to self		51
Negative peer influences		16
Teachers		10
Family problems		7
Finances		7
School/particular classes boring		5
Drug abuse		4
Unsure		3
Minor		3
Think about in school	110	
Getting out/cutting		33
Daydreaming		24
Doing school work		19
Future		8
Graduating		5
Own inadequacy		4
Failing		3
Other		9

[1]Only one response could be chosen for this question. Multiple responses were possible for all others.

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